

ANNUAL REPORT
OF THE
WATER RESOURCES STUDY COMMITTEE



Indiana Legislative Services Agency
200 W. Washington Street, Suite 301
Indianapolis, Indiana 46204

December, 2011

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2011

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WATER RESOURCES STUDY COMMITTEE

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**Irma Reinumagi
Attorney for the Committee**

**Jessica Harmon
Fiscal Analyst for the Committee**

I. STATUTORY DIRECTIVE

The Indiana General Assembly enacted legislation (IC 2-5-25-5) that provides that the Water Resources Study Committee (WRSC) shall study and may make recommendations concerning all matters relating to the surface and ground water resources of Indiana, including the following:

- (1) The usage, quality, and quantity of water resources.
- (2) Issues concerning diffused surface water, the common enemy doctrine of law, and runoff.

The Legislative Council did not assign any specific study topics to the Committee for the 2011 interim.

II. SUMMARY OF WORK PROGRAM

The Committee met twice during the 2011 interim. At the first meeting, held on August 26, 2011, the Committee heard testimony from various individuals concerning the geology of groundwater in Indiana, water research facilities, and managing Indiana's water resources, and from the Department of Natural Resources (DNR) concerning the agency's work in water-related areas.

At the second meeting, held on October 20, 2011, the Committee heard testimony from several witnesses concerning Indiana water resource policies, and adopted findings and recommendations.

III. SUMMARY OF TESTIMONY

The Committee heard testimony from the following individuals:

August 26 meeting:

Dr. Bill Blomquist, Dean, School of Liberal Arts, IUPUI, introduced Drs. Steinmetz, Turco, and Wittman.

Dr. John Steinmetz, State Geologist and Director, Indiana Geological Survey, presented information about the geology of Indiana as it relates to groundwater, including groundwater flow modeling. As technology has improved, underground mapping and flow modeling have become more precise, allowing a clearer understanding of the locations and movement of Indiana groundwater.

Dr. Ronald Turco, Purdue University, Director, Indiana Water Resources

Research Institute and Purdue Water Center, explained that the Indiana Water Resources Research Institute is part of a network of state research centers created by federal statute that provide research resources on local water issues and water education. Each state establishes its own research priorities. In Indiana, the Center supports research in all areas of water science, including lake management, septic systems, surface water management, and wetlands. The Purdue Water Center is part of the Global Sustainability Institute at Purdue.

Dr. Jack Wittman, National Director, Layne Geosciences, discussed the hydrogeology of Indiana in terms of surface and groundwater, pointing out that water is needed where there is demand and infrastructure, and where there will be growth. Water supply planning is necessary to account for growth, and can best be done on a regional basis, with systems that are reliable, resilient, and diversified. He would recommend modernizing the regulatory structure over water and developing statutory guidance concerning mapping and resource priorities.

Ron McAhrn, Deputy Director, Bureau of Resource Regulation, DNR, discussed types of information available from DNR; the number of significant water withdrawal facilities in the state; the amount of water withdrawn and sold from reservoirs and well fields; and progress under the Great Lakes Compact.

October 20 meeting:

Dr. Wittman presented maps of water usage data across the state, and urged the state to use the data and the available talent in universities and state agencies to continue mapping aquifers in order to develop a policy on regional water systems and planning. He would recommend the policy recognize the regional scale of water usage, the role of conservation and water reuse, the value of aquifer storage, and large scale inter-basin transfers of water.

Kevin Strunk, a professional consulting geologist, stated that water, while assumed to be free, actually has a value that can be monetized. He also urged more funding for DNR and the Geological Survey for their work in water.

Tom Bruns, AquaIN and chair of the Indiana Association of Water Companies, stated Indiana's water supply can be used for economic development, keeping in mind regional limitations. The issue of central Indiana's long term water supply needs to be addressed. In addition, the state needs to work with the federal government to access the water supply from the reservoirs along the Upper Wabash River.

Vince Griffin, Indiana Chamber of Commerce, pointed out that Indiana is in a unique position to develop a policy for the future of water, since there is not a

current crisis occurring, and that the state can create an economic driver with water.

Glenn Pratt, former IDEM assistant commissioner, stressed the need to educate people on water conservation and to protect the water supply from pollution.

IV. COMMITTEE FINDINGS AND RECOMMENDATIONS

The Committee made the following findings of fact:

While Indiana has been doing research and mapping of water resources, the institutional infrastructure that regulates and manages water resources may not be prepared to manage the serious economic effects of regional shortage.

Groundwater is the natural alternative to surface water during a drought; however, regional aquifers are absent in the rocky hills of the southern half of the state, and thus the region is more vulnerable to drought. The central region of the state includes the largest metropolitan area, which relies on a local aquifer that is being aggressively pumped.

If the state policy is meant to encourage economic stability and growth, the state needs to take advantage of existing data, available talent, and a shared commitment to plan for a future that can ensure a safe and abundant supply of water.

The Committee made the following recommendations:

- (1) Water research in Indiana needs to be supported.

The Committee recommends that there be a comprehensive assessment of research being done in the state that helps our institutions manage supplies of water. This would include research and technical activities at any of the universities/higher education institutions in Indiana (in particular the Indiana Water Resources Research Institute) as well as in the state agencies. The results of this assessment will be presented to the Water Resources Study Committee at its first scheduled meeting in 2012.

2. Mapping aquifers is important to the economy of the state.

The Committee recommends that the state consider ways to specifically encourage and support the mapping work being done by the Indiana Geological Survey. The current pace of mapping, at an appropriate scale

for decision-making, is not adequate to address immediate groundwater resource questions. These maps become important to our understanding of water availability.

3. Develop policy on regional water systems and planning.

The state needs to consider an approach to managing the risks of drought that distinguishes the different needs of each part of the state based on differences in growth, water availability, and regional alternatives. New policy needs to be developed that recognizes the regional scale of the problems, considers the use of conservation and water reuse, aquifer storage, and large scale inter-basin transfers.

4. The Committee recommends that the state should work with all stakeholders to:

(A) Create an inventory of Indiana's water resources.

(B) Inventory those areas in Indiana that will need water over the next 15 years.

(C) Assess and develop a review of those areas in the state that have water resources and those that have water needs. Perform an analysis of how those needs can best be satisfied - even in the event of a drought.

(D) Develop water and wastewater infrastructure investment priorities.

(E) Create a comprehensive list of alternatives that can reform and restructure how water is used and regulated with special attention to a regional approach to water and wastewater.

(F) Draft legislation, rules, and best management procedures that are necessary to create an effective system that will maximize the value of our water resources.

(G) Develop a comprehensive plan (including legislation and rules), considering water and waste water needs, that will realize a secure and advantageous position for our state's citizens, businesses and industries and promote aggressive economic development.

WITNESS LIST

Dr. Bill Blomquist, Dean, School of Liberal Arts, IUPUI

Tom Bruns, AquaIN, Chair, Indiana Association of Water Companies

Vince Griffin, Indiana Chamber of Commerce

Ron McAhrn, Deputy Director, Bureau of Resource Regulation, Department of Natural
Resources

Glenn Pratt

Dr. John Steinmetz, State Geologist and Director, Indiana Geological Survey

Kevin Strunk

Dr. Ronald Turco, Purdue University; Director, Indiana Water Resources Research
Institute and Purdue Water Center

Dr. Jack Wittman, National Director, Layne Geosciences